COMPLIANCE INFORMATION

CISPR22/EN55022 Class A&B + EN55024
CE Mark

FCC Regulations

This equipment has been tested and found to comply with the limits for a class A & B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

Canadian Regulations

This digital apparatus does not exceed the Class A & B limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A & B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European Regulations

Warning
This is a Class A & B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Achtung !
Dieses ist ein Gerät der Funkstörgrenzwertklasse A & B. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten, in weichen Fällen der Benutzer für entsprechende Gegenmaßnahmen werantwortlich ist.

Attention !
Ceci est un produit de Classe A & B. Dans un environment domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilsateur de prende les measures spécifiques appropriées

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TRANSITION networks

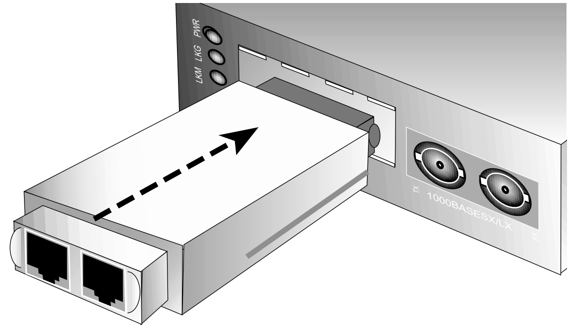
Gigabit Interface Converter (GBIC)

Transceiver Modules

TN-GB-xM5

USER'S GUIDE

The TRANSITION Networks TN-GB-xM5 series Gigabit Interface Converter (GBIC) transceiver modules, designed to be installed in any GBIC port, connect *multimode 1000BASE-SX OR singlemode 1000BASE-LX* fiber-optic cable to the network through the GBIC connector.



TN-GB-MM5

*A 1000BASE-SX GBIC module for 1000BASE-SX **multimode 850 nm** fiber-optic cable for a data link of up to 500 meters on 50/125 multimode fiber and up to 220 meters on 62.5/125 multimode fiber.*

TN-GB-SM5

*A 1000BASE-LX GBIC module for 1000BASE-LX **singlemode 1300 nm** fiber-optic cable for a data link of up to 10 kilometers.*

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INSTALLATION

Install GBIC Transceiver Module in Media Converter

To install GBIC transceiver module in Media Converter:

1. Position GBIC transceiver module at installation slot so that label faces up.
2. Carefully slide GBIC transceiver module into installation slot, aligning GBIC transceiver module with internal installation guides.

NOTE: Ensure that GBIC transceiver module is firmly seated against internal mating connector.

Install Cable

1. Locate or build 1000BASE-SX-compliant or 1000BASE-LX-compliant fiber cable with male TX to RX connectors installed at both ends.
2. Connect cable with connector installed at TX location on transceiver module to RX location on attached device.
3. Connect cable with connector installed at RX location on transceiver module to TX location on attached device.

CABLE SPECIFICATIONS

TN-GB-MM5 *(multimode)*	**850 NM (SX)**	
Fiber Optic Cable Recommended:	62.5/125 µm multimode	
Optional:	50/125 µm multimode	
Fiber-optic Transmitter Power:	min: -9.5 dBm	max: -4.0 dBm
Fiber-optic Receiver Sensitivity:	min: -17.0 dBm	max: -3.0 dBm
Typical Maximum* Cable Distance:	220 meters on 62.5/125 µm multimode 500 meters on 50/125 µm multimode	

TN-GB-SM5 *(singlemode)*	**1300 NM (LX)**	
Fiber Optic Cable Recommended:	9 µm singlemode fiber	
Fiber-optic Transmitter Power:	min: -9.5 dBm	max: -3.0 dBm
Fiber-optic Receiver Sensitivity:	min: -19.0 dBm	max: -3.0 dBm
Typical Maximum* Cable Distance:	10 kilometers	

*Actual distance dependent upon physical characteristics of network installation.

TECHNICAL SPECIFICATIONS

Standards	IEEE802.3z/D2 Gigabit Ethernet (1000BASE-SX and 1000BASE-LX); Revision 5.4 compliant [4] (GBIC) Laser Class 1 Product (Laser Klasse 1 Product) which complies with the requirements of IEC 60825-1 and IEC 60825-2	
Dimensions	3.4" x 0.86" x 5.0" (86mm x 22mm x 127mm)	
Weight	8 oz (approximate)	
Environment	Typical Operating Temperature:	0-70°C (32° to 158° F)
	Storage Temperature:	-40° to 85°C (-40° to 185°F)
	Humidity	5-95%, non condensing
	Altitude	0-10,000 feet
Warranty	Lifetime	

DECLARATION OF CONFORMITY

Name of Mfg:	**Transition Networks** 6475 City West Parkway, Minneapolis MN 55344 USA
Model:	**TN-GB-xM5 Series GBIC Transceiver Modules**
Part Number(s):	**TN-GB-MM5, TN-GB-SM5**
Regulation:	**EMC Directive 89/336/EEC**

Purpose: To declare that the ***TN-GB-xM5*** to which this declaration refers is in conformity with the following standards.

EN 55022:1994; EN 55024:1998; FCC Part 15 Class A&B; EN 60950 A4:1997

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Stephen Anderson, Vice-President of Engineering

April 1, 2002
Date